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Mark Dilman

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PATTERSON & SHERIDAN, LLP/
LUCENT TECHNOLOGIES, INC
595 SHREWSBURY AVENUE
SHREWSBURY, NJ 07702

EXAMINER

BILGRAMI, ASGHAR H

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 6, 9 & 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boukobza et al (U.S. 6,122,664) and Robinson et al (U.S. 6,570,867).

3. As per claims 1, 9 & 10 Boukobza disclosed a method for monitoring usage of resources allocated to a plurality of nodes of a network comprising the steps of assigning a parameter to each of the plurality of nodes of the network, wherein each parameter is indicative of a rate of change of usage of said resources of the node, locally monitoring at each of the nodes the rate of change of the usage of said resources of the nodes; reporting to a centralized management station of the network when the rate of change of the usage of the resources of one of the nodes exceeds a first threshold (col.1, lines 33-35 & col.2, lines 21-55). However Boukobza did not explicitly disclose initiating a poll of resources of nodes of the network by the centralized management station in response to reporting from the node or a time interval being exceeded; determining whether a sum of the currently reported rates of change of usage of node resources, received in response to the poll initiated by the management station, exceeds a second threshold; and generating an alarm if the sum of the currently

reported rates of change of usage of node resources exceeds the second threshold, else updating the time interval.

In the same field of endeavor Robinson disclosed initiating a poll of resources of nodes of the network by the centralized management station in response to reporting from the node or a time interval being exceeded; determining whether a sum of the currently reported rates of change of usage of node resources, received in response to the poll initiated by the management station, exceeds a second threshold; and generating an alarm if the sum of the currently reported rates of change of usage of node resources exceeds the second threshold, else updating the time interval (col.2, lines 60-67, col.3, lines 1-12, col.5, lines 3-55, col.12, lines 26-44 & col.13, lines 46-58).

It would have been obvious to one in the ordinary skill in the art at the time the invention was made to have incorporated central management station initiating a poll of resources of at least one node in response to the reporting from the node disclosed by Robinson in a method of monitoring usage of resources in nodes of a network as disclosed by Boukobza in order to improve the management and monitoring of paths and routes available in a network resulting in a more stable and robust network for users.

4. As per claim 6 Boukobza-Robinson disclosed the method of claim 1, further including the step of adjusting the usage of the resources in the node (Boukobza col.2, lines 21-38).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 7, 8, 11, 12 & 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruyama et al (U.S. 6,857,025 B1) and Robinson et al (U.S. 6,570,867).

7. As per claim 7 Maruyama disclosed a method for monitoring usage of a resource in nodes of a network (col.3, lines 52-67), comprising the steps of: (a) monitoring usage of the resource in a node to determine when a rate of change of the usage exceeds a first predetermined threshold: (b) reporting to a management station of the network when the rate of change of the usage exceeds said first predetermined threshold (col.4, lines 29-67, col.5, lines 1-35, col.8, lines 66-67 & col.9, lines 1-37). However Maruyama did not explicitly disclose (c) initiating a poll of resources in the nodes of the network by the management station in response to reporting from the node or a time interval being exceeded. In the same field of endeavor Robinson disclosed (c) initiating a poll of resources in the nodes of the network by the management station in response to reporting from the node or a time interval being exceeded (col.2, lines 60-67, col.3, lines 1-12, col.5, lines 3-55, col.12, lines 26-44 & col.13, lines 46-58).

It would have been obvious to one in the ordinary skill in the art at the time the invention was made to have incorporated initiating a poll of resources in the nodes of the network by the management station in response to reporting from the node or a time interval being exceeded disclosed by Robinson in a method of monitoring usage of resources in nodes of a network as disclosed by Maruyama in order to improve the management and monitoring of paths and routes available in a network resulting in a more stable and robust network for users.

8. As per claim 8 Maruyama disclosed a method of monitoring usage of resources in nodes of a network, comprising the steps of: asynchronous reporting of an event to a management station of the network of an event when a rate of change of a usage of at least one resource of said resources in any of said node deviates from a prescribed norm (col.3, lines 52-67, col.4, lines 29-67, col.5, lines 1-35, col.8, lines 66-67 & col.9, lines 1-37). However Maruyama did not explicitly disclose periodic polling of the said nodes in accordance with a polling interval, and a periodic polling of said nodes in response to reporting of said event, wherein a tunable parameter is adjusted in response to the usage. In the same field of endeavor Robinson disclosed periodic polling of the said nodes in accordance with a polling interval, and a periodic polling of said nodes in response to reporting of said event node (col.2, lines 60-67, col.3, lines 1-12, col.5, lines 3-55, col.12, lines 26-44 & col.13, lines 46-58), wherein a tunable parameter is adjusted in response to the usage (col.7, lines 59-64).

It would have been obvious to one in the ordinary skill in the art at the time the invention was made to have incorporated central management station initiating a poll of resources of at least one node in response to the reporting from the node disclosed by Robinson in a method of monitoring usage of resources in nodes of a network as disclosed by Maruyama in order to improve the management and monitoring of paths and routes available in a network resulting in a more stable and robust network for users.

9. As per claim 11 Maruyama-Robinson disclosed the method defined in claim 8 wherein said nodes are selected from the group consisting of routers, switches, bridges and firewall devices (Robinson, col.5, lines 3-12).

10. As per claim 12 Maruyama-Robinson disclosed the method defined in claim 8 wherein said nodes are selected from the group consisting of servers, hosts, and layer 4-7 switches (Maruyama, col.4, lines 29-44).

11. As per claims 14 Maruyama-Robinson disclosed the method comprising: (e) summing all the reported rate of change of the usage of the resources; and (e) generating an alarm if the sum exceeds a second threshold, else updating a time interval (Maruyama, col.4, lines 29-67 & col.5, lines 1-35).

Response to Arguments

12. Applicant argued that neither Boukobza nor Robinson disclose assigning a node parameter indicative of a rate of change of usage of said resource, locally monitoring, at the node, the rate of change of the usage of the resources.

As to applicant's argument the monitoring of the performance of a resource on network node against a threshold is analogous to monitoring the rate of change of usage a resource on a network node. The specification does not disclose a clear description of a resource therefore examiner has made the broadest interpretation of what a resource is and in this case it is CPU utilization rate which is disclosed by Boukobza. Applicant describes rate of change on page 9 in the context as at each time t, a determination is made as to whether the rate of change on the monitored variable at any node exceeds a fixed amount. In the same context Boukobza describes measurement/monitoring of CPU utilization rate against a threshold on col.6, lines 4-14 & col.14, lines 56-58).

13. Applicant argued that neither Robinson not Maruyama disclose the feature of monitoring the rate of change of usage of resources.

14. As to applicant's argument, applicant's specification does not disclose a clear description of a resource therefore examiner has made the broadest interpretation of what a resource is and in this case it is CPU utilization rate which is disclosed by Boukobza. Applicant describes rate of change on page 9 in the context as at each time t, a determination is made as to whether the rate of change on the monitored variable at any node exceeds a fixed amount. Maruyama clearly discloses the monitoring the usage of a resource at fixed intervals (times) against a threshold.

Conclusion

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ASGHAR BILGRAMI whose telephone number is (571)272-3907. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Flynn can be reached on 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2154

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. B./

Examiner, Art Unit 2143

/Nathan J. Flynn/

Supervisory Patent Examiner, Art Unit 2154